

Notice of Allowability

Application No.

10/727,791

Examiner

Henry S. Hu

Applicant(s)

BATE, THOMAS J.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment of January 24, 2005.
2. ☒ The allowed claim(s) is/are 51-56.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in two telephone interviews with **Mark H. Remus (tel. 312 321-4200) on February 18 and 23, 2005** to cancel new Claims 57-67 as following:

CLAIMS

Claims 57-67 please cancel Claims 57-67

DETAILED ACTION

2. This Office Action is in response to the Amendment filed on January 24, 2005. With the amendment, originally submitted **Claims 1-50 were canceled**, while newly submitted **Claims 51-67 were added**. However, the newly submitted **Claims 54-67 were canceled** with the above examiner's amendment. To be more specific, parent **Claim 51** was rewritten from Claim 1 to

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incorporate the limitation of **Claim 4** by specifically using polyurethane diol or polyester diol as the alcohol component; while parent **Claim 54** was rewritten from Claim 1 to incorporate the limitation of **Claim 15** by adding a polyether modified dimethylpolysiloxane copolymer as component (d).

With respect to the specification objections (a) and (b), the Applicants have amended the paragraphs beginning in page 2 at line 27 to correct the name of EPDM rubber, page 6 at line 19, page 7 at line 21 to remove extra use of propylene glycol as suggested by the examiner. In a close examination, the specification objection (c) with “~77°F” for a room temperature and the claim objection for Claims 5-10 using the weight ratio may be proper and are now accepted by the examiner. The examiner thereby withdraws all specification objections and claim objection in the previous Office Action dated September 20, 2004. In summary, **Claims 51-56 are pending now.** An action follows.

3. Claim rejections under 102(a), 102(b), 102(e) and 103 (a) rejections in the previous office action dated September 20, 2004 are now removed for the reasons given in paragraphs 4-11 thereafter.

Allowable Subject Matter

4. Claims 51-56 are allowed.

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5. The following is an examiner's statement of reasons for allowance: The above claims 51-56 are allowed over the closest references:

6. The limitation of amended parent **Claim 51** of present invention relates to ***a non-stick coating formulation comprising: (a) an acrylic polymer, (b) an alcohol selected from the group consisting of a polyurethane diol, a polyester polyol, and mixtures thereof, and (c) a fluoropolymer; wherein the ratio of acrylic polymer to the alcohol is between about 90:10 and about 10:90 by weight. Other parent Claim 54 relates to Claim 1 but using only diol or polyol in component (c) and adding a polyether modified dimethylpolysiloxane as extra component (d). See other limitations of dependent Claims 52-53 and 55-56.***

7. In view of the Applicants' amendment and the examiner's amendment, parent **Claim 51** was rewritten from Claim 1 to incorporate the limitation of **Claim 4** by specifically using polyurethane diol or polyester diol as the alcohol component; while parent **Claim 54** was rewritten from Claim 1 to incorporate the limitation of **Claim 15** by adding a polyether modified dimethylpolysiloxane copolymer as component (d). The limitations of both new claims are in addition to the limitations of originally submitted Claim 1, that is, a non-stick coating formulation comprising an acrylic polymer (a), and a fluoropolymer (b).

As mentioned in previous office action, parent Claim 1 in all three 102 rejections for Claims 1 and 3, both references do not disclose using the claimed polyurethane diol or polyester

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diol as the alcohol component (b) as well as using a polyether modified dimethylpolysiloxane copolymer as component (d). The Applicants in pages 7-8 of Remarks point them out.

8. In a close examination, one reference **Tannenbaum** only discloses a method for the production of an improved non-stick coating system which can be applied on untreated smooth substrate with a topcoat composition comprising a PTFE polymer, a triol of triethanolamine and an acrylic terpolymer latex. The other reference **Huesmann** et al. only discloses a method for the production of a non-stick coating which can be applied on a substrate with a intermediate and/or top coating composition comprising a fluoropolymer, triethanolamine and an acrylic terpolymer.

In a close view on the specific “alcohol” limitation for parent **Claim 51**, triethanolamine is only an organic compound of amine-triol, while the claimed polyurethane diol and polyester diol are each a polymer with much higher molecular weight. Therefore, the resulting cured products would be quite different in view of film quality, rigidity and degree of crosslinkage.

In a close view on the extra limitation for parent **Claim 54** on adding a polyether modified dimethylpolysiloxane copolymer as component (d), it is **a very flexible linear polymer**. Therefore, the resulting cured products would also be quite different in view of film quality, rigidity and degree of crosslinkage.

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9. With respect to 103 rejections for dependent Claim 2, the secondary **Bahadur** reference may teach that in the course of making a coating films, a silane-containing acrylic compound or a silicon-bonded hydrolyzable group-containing compound can be included in the composition to improve the non-stick coating film property. However, Bahadur does not fix the deficiency of Tannenbaum or Huesmann. With respect to 103 rejections for dependent Claims 5-10 for obviousness, Tannenbaum or Huesmann, each is still silent about using the claimed weight ratio of acrylic polymer, alcohol and fluoropolymer.

It is noted that the subject matter in dependent **Claims 4 and 11-15** are indicated as allowable subject matter in the previous office action. Additionally, the present invention has shown in examples along with some comparative examples for unexpected results in obtaining a non-stick coating on **pages 6-10** for several examples. Therefore, all the above-mentioned references, in combination or alone, does not teach or fairly suggest the limitations of present invention.

10. After further examination and search, the examiner found the following prior art did not teach the claimed limitation:

US Patent No. 5,985,454 to McMordie et al. only discloses the preparation of multilayered coating comprising a sacrificial primer layer, a non-sacrificial second layer, and a polymer topcoat (abstract, line 1-3). Only some short mentions on using polyol (column 14, line 1), fluoropolymer (column 11, line 39) and acrylic resin (column 9, line 24) are disclosed.

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However, **McMordie does not disclose using the claimed polyurethane diol or polyester diol** as the alcohol component (b) as well as **using a polyether modified dimethylpolysiloxane copolymer** as component (d). Therefore, McMordie fails to teach or fairly suggest the limitation of present invention.

11. The two key issues, the specific limitations as using polyurethane diol or polyester diol as the alcohol component (b) as well as using a polyether modified dimethylpolysiloxane copolymer as component (d), cannot be overcome by any or the combination of the above references, therefore, the present invention is novel.

12. As of the date of this office action, the examiner has not located or identified any reference that can be used singularly or in combination with another reference including the above references to render the present invention anticipated or obvious to one of the ordinary skill in the art. Therefore, the two independent and parent **Claims 51 and 54** are allowed for the reason listed above. Since the prior art of record fails to teach the present invention, the remaining pending dependent **Claims 52-53 and 55-56** are passed to issue.

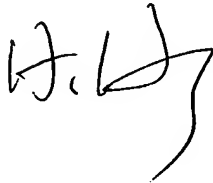
13. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

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14. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Henry S. Hu whose telephone number is (571) 272-1103. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communications.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Henry S. Hu

Patent Examiner, art Unit 1713, USPTO

February 27, 2005



DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700